

- [LPA-VIII]:  $\text{HC}(\text{CH}_2\text{CO-LysGluProAsnLysGlyValAsnProAspGlu-Val}\beta\text{Ala})_2\text{COOH}$ ,  
[LPA-IX]:  $\text{Fmoc-NHCH}(\text{CH}_2\text{CO-AspArgValTyrIleHisProPheHisLeu-NH}_2)_2$ ,  
[LPA-X]:  $\text{Aloc-NHCH}(\text{CH}_2\text{CO-AspArgValTyrIleHisProPheHisLeu-NH}_2)_2$ , and  
[LPA-XI]:  $\text{Fmoc-AspProThrGlnAsnIleProProGly-NHCH}(\text{CH}_2\text{CO-AspArgValTyrIleHis-}$   
 $\text{ProPheHisLeu-NH}_2)_2$ .

44. The method according to claim 12, wherein the LPA obtained further comprises  
desired sequence (s) derived from the flagellum of *Borrelia burgdorferi* or a homologous sequence  
capable of reacting with anti-flagellum antibodies.

45. The method according to claim 16, wherein the LPA obtained is selected from the  
group consisting of

- [LPA-V]:  $(\text{HO-ProLysLysProSerGluAlaValValPro-COCH}_2)_2\text{CH-NH-Lys}(\text{GlnLeuAlaAsnAsn-}$   
 $\text{LeuGluThrAlaThrAlaAspTrpLysGlnGlnValGlyGlnTyr-H})_2$ , and  
[LPA-VI]:  $(\text{HO-ProLysLysProSerGluAlaValValPro-COCH}_2)_2\text{N-Lys}(\text{AlaSerAlaAlaAlaGlu-}$   
 $\text{IleGlyAlaPheAsnTrpGlnGlnGluThrMet-H})_2$ .

#### REMARKS

Claims 1-45 are presented for consideration.